

PATENT ABSTRACTS OF JAPAN

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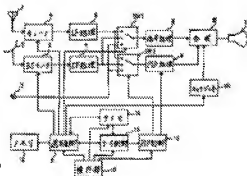
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(54) TELEVISION RECEIVER

(57)Abstract:

PURPOSE: To provide a television receiver with which a viewer can see the broadcast contents of other channels periodically while seeing the picture of the channel being received.

CONSTITUTION: In the television receiver which is provided with two tuners, and displays two pictures at a time by displaying the picture of the tuner of one side as a master image and the picture of the tuner of the other side as a slave image, it is constituted of a channel selection control part 11 to make the tuner for obtaining the picture of the slave image screen select successively the channels, a timer 14 capable of setting a prescribed interval of time, and a search control part 13 to control so as to display the pictures selected successively by the channel selection control part 11 on the slave image screen at every interval of time set by the timer 14.



Claim(s)

[Claim 1] In a television receiver which has two tuners, uses a picture of one tuner as a main channel, and projects a picture of a sub channel for a picture of a tuner of another side simultaneously with the main as a sub channel, A channel selection means to tune in a tuner for acquiring a picture of the above-mentioned sub channel at the time of a request one by one, A television receiver which consists of a timer means which can set up a predetermined time interval, and a control means controlled to project a picture which was set up by the above-mentioned timer means, and which was tuned in one by one by the above-mentioned channel selection means for every time interval to a sub channel.

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the television receiver etc. which can display a channel image one by one all over 1 screen.

[0002]

[Description of the Prior Art] In recent years, the receiver having the BS tuner follow on not only terrestrial broadcasting but satellite broadcasting (henceforth BS broadcasting) being started, and both enabled it to receive is developed.

[0003] In the case of such a receiver also having a BS tuner, it has composition which also has a tuner which can receive natural ***** terrestrial broadcasting, and has two tuners. For this reason, ***** provided with the function what is called of a picture yne picture (henceforth PIP) which displays the image, the Lord and **, of two channels simultaneously all over 1 screen with a television receiver etc. in order to respond to the request it was able to be made to see both on the same screen.

[0004] It is known art as this function is shown also in JP,S49-2419,A.

[0005] By the way, in the television receiver provided with the PIP function, the broadcasted image of each channel is simultaneously projected on a screen, and the art in which efficient channel selection operation can be performed is indicated by JP,S56-52971,A so that the contents of broadcast of the receiving channel of each broadcast may be understood immediately.

[0006] However, in the conventional technology mentioned above, in order to project the broadcasted image of each channel simultaneously on a screen, when the receiving channel seen now had to be erased and an operator used the function, there was a fault referred to as having to carry out the operation one by one.

[0007]

[Problem(s) to be Solved by the Invention] An object of this invention is to provide periodically the television receiver which the contents of broadcast of other channels understood, looking at the receiving channel seen now, in order to solve the fault mentioned above.

[0008]

[Means for Solving the Problem] A television receiver which this invention has two tuners which are characterized by that a television receiver comprises the following, uses a picture of one tuner as a main channel, and projects a picture of a sub2 ** channel for a picture of a tuner of another side simultaneously with the Lord as a sub channel.

A channel selection means to tune in a tuner for acquiring a picture of the above-mentioned sub channel at the time of a request one by one.

A timer means which can set up a predetermined time interval.

A control means controlled to project a picture which was set up by the above-mentioned timer means, and which was tuned in one by one by the above-mentioned channel selection means for every time interval to a sub channel.

[0009]

[Function] This invention is having composition which was mentioned above, and each contents of broadcast of one tuner of inside with 2 tuners understand it periodically.

[0010]

[Example] Working example of this invention is explained referring to drawing 1, drawing 2, and drawing 3. In drawing 1, the antenna for terrestrial waves and 2 1 First, the antenna for BS broadcasting, 3 an external input terminal and 4 the tuner for terrestrial waves, and 5 The tuner

for BS broadcasting, 6 an IF signal processing circuit and 7 the IF signal processing circuit of a BS signal, and 8 A video signal processing circuit, The character generator with which 9 generates a PIP digital disposal circuit and 16 generates an alphabetic signal etc., the synthetic circuit where 18 compounds selectively the signal of the video signal processing circuit 8, the PIP digital disposal circuit 9, and the character generator 16, and 17 are CRT (cathode-ray tube). [0011] And 10 is a final controlling element and directs a channel selection channel, the change of a signal, etc. 11 sends out the tuning signal to the tuner 4 for terrestrial waves, and the tuner 5 for BS broadcasting, The channel selection control section which performs control for [to the change of a signal, and CRT] indicating by an alphabetic signal, The nonvolatile memory 12 remembered tuning data etc. to be, the timer with which 14 calculates real time, The PIP control section to which 15 performs the selection control of the signal of the PIP digital disposal circuit 9 and a child screen, and 13 control the channel selection control section 11 and the PIP control section 15, when performing channel search by a search control section.

[0012] They are a switch whose SW1 changes the antenna 1 for terrestrial waves, the antenna 2 for BS broadcasting, and the signal from the external input terminal 3, and a switch which SW2 chooses the signal of a child screen and changes.

[0013] Next, operation of this invention is explained. First, if channel search is specified by the final controlling element 10 (this function is hereafter called search window), the search control section 13 will receive those instructions. Next, in order to decide a search time interval, it points to setting out of the timer 14, and an operator sets up a search time interval by the final controlling element 10. This set period is the time of whether to carry out channel search for setting.

For example, an operator enables it to set up either every 60 minutes or OFF arbitrarily for 15 minutes of real time, and 30 minutes.

[0014] And search control will be started if selection of a set period ends. Explanation of this operation is explained using the flow chart of drawing 2. First, if a search window function is specified, it will detect [whether a set period came and] by the search control section 13. (-- for example, -- if setting out in every 15 minutes is directed -- AM1:15, AM1:30, and AM1:45 -- channel search is performed to AM 2:00 --) -- if a set period comes, the signal source of the present parent screen will be distinguished.

[0015] Next, if the signal source of this parent screen is distinguished, it will carry out and the tuner versus the tuner which has acquired this signal source which is one more will be chosen. This selection is shown in Table 1, for example.

[0016]

[Table 1]

親 画 面	地上放送	B S 放送	外部入力
子 画 面	B S 放送	地上放送	地上放送

[0017] And it compounds on a parent screen by using as a child screen the signal which led the selected signal source to the PIP processing circuit 9, operated the PIP processing circuit 9, and

was processed. At this time, if channel selection operation is operated so that a channel may be changed for every second, it is performed until a channel carries out this operation the 1 surroundings, and a channel takes the 1 surroundings, it will stop and a channel change will also stop the output from a PIP processing circuit in connection with it.

[0018]Therefore, if it is made above, the contents of broadcast of a tuner other than the tuner currently used on the parent screen 30 like drawing 3 can be periodically seen on the child screen 33. The channel display 32 of the CRT display also changes simultaneously with the channel change of a child screen. 31 is the channel display of a parent screen.

[0019]This operation is made as [perform / for every set period / this operation], while specifying the search window.

[0020]Since he is trying to make the data of that set period memorize to the nonvolatile memory 12 once this search window function is set up, even if one [a function / a power supply turns it off and] after that, if a set period comes, the search window function will operate. What is necessary is just to turn off a set period, although this function is stopped.

[0021]
[Effect of the Invention]According to this invention, it is effective in the ability to check automatically and periodically the contents of broadcast of each channel of the tuner of another side, looking at the screen to which it is viewing and listening now.

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